IN THE CLAIMS

Please cancel Claims 1-26 without prejudice or disclaimer of the subject matter thereof.

Please add Claims 27-47 as follows:

27. An isolated *C. felis* cDNA molecule or a *C. felis* RNA molecule nucleic acid molecule selected from the group consisting of (a) a *C. felis* cDNA molecule or a *C. felis* RNA molecule that hybridizes to a polynucleotide selected from the group consisting of SEQ ID NO:1874 and SEQ ID NO:1876 under conditions comprising (1) hybridizing in a solution comprising 1X SSC in the absence of helix destabilizing compounds, at a temperature of about 37°C and (2) washing in a solution comprising 1X SSC and in the absence of helix destabilizing compounds, at a temperature of about 47.5°C, wherein said isolated nucleic acid molecule encodes a protein having chloride channel activity; and (b) a *C. felis* cDNA molecule or a *C. felis* RNA molecule comprising a nucleic acid sequence fully complementary to a nucleic acid molecule of (a).

28. The nucleic acid molecule of Claim 27, wherein said nucleic acid molecule is selected from the group consisting of: a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO:1872, SEQ ID NO:1874, SEQ ID NO:1875 and SEQ ID NO:1876; and fragments thereof, wherein said fragment comprises at least 25 contiguous nucleotides from a nucleic acid sequence selected from the group consisting of SEQ ID NO:1872, SEQ ID NO:1874, SEQ ID NO:1875 and SEQ ID NO:1876.

29. The nucleic acid molecule of Claim 27, wherein said nucleic acid molecule encodes a protein comprising amino acid sequence SEQ ID NO:1873 and nucleic acid molecules encoding a variant thereof that is at least 95% identical to SEQ ID NO:1873, wherein said variant protein has chloride channel activity.

30. The nucleic acid molecule of Claim 27, wherein said nucleic acid molecule encodes a protein comprising amino acid sequence SEQ ID NO:1873.

31. A recombinant molecule comprising a nucleic acid molecule as set forth in Claim 27 operatively linked to a transcription control sequence.

32. A recombinant virus comprising a nucleic acid molecule as set forth in Claim 27.

33. A recombinant cell comprising a nucleic acid molecule as set forth in Claim 27.

34. A method to produce a protein encoded by an isolated nucleic acid molecule selected from the group consisting of a *C. felis* cDNA molecule and a *C. felis* RNA molecule that hybridizes to a polynucleotide selected from the group consisting of SEQ ID NO:1874 and SEQ ID NO:1876, under conditions comprising (a) hybridizing in a solution comprising 1X SSC in the absence of helix destabilizing compounds, at a temperature of about 37°C and (b) washing in a solution comprising 1X SSC in the absence of helix destabilizing compounds, at a temperature of about 47.5°C, wherein said isolated nucleic acid molecule encodes a protein having chloride channel activity, said method comprising the steps of (1) culturing a cell transformed with said isolated nucleic acid molecule encoding said protein operatively linked to a transcription control sequence and (2) recovering said encoded protein.

35. The method of Claim 34, wherein said nucleic acid molecule encodes a protein having amino acid sequence SEQ ID NO:1873.

36. The method of Claim 34, wherein said nucleic acid molecule is selected from the group consisting of: a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO:1872 and SEQ ID NO:1875; and fragments thereof, wherein said fragment comprises at least 25 contiguous nucleotides from a nucleic acid sequence selected from the group consisting of SEQ ID NO:1872 and SEQ ID NO:1875.

37. A composition comprising an excipient and an isolated *C. felis* cDNA molecule or a *C. felis* RNA molecule nucleic acid molecule selected from the group consisting of (a) a *C. felis* cDNA molecule or a *C. felis* RNA molecule that hybridizes to a polynucleotide selected from the group consisting of SEQ ID NO:1874 and SEQ ID NO:1876 under conditions comprising (1) hybridizing in a solution comprising 1X SSC in the absence of helix destabilizing compounds, at a temperature of about 37°C and (2) washing in a solution comprising 1X SSC and in the absence of helix destabilizing compounds, at a temperature of about 47.5°C, wherein said isolated nucleic acid molecule encodes a protein having chloride channel activity; and (b) a *C. felis* cDNA molecule or a *C. felis* RNA molecule comprising a nucleic acid sequence fully complementary to a nucleic acid molecule of (a).

38. The composition of Claim 37, wherein said composition further comprises a component selected from the group consisting of an adjuvant and a carrier.

39. An isolated protein encoded by a *C. felis* cDNA molecule or a *C. felis* RNA molecule that hybridizes to a nucleic acid sequence selected from the group consisting of SEQ ID NO:15, SEQ ID NO:18, SEQ ID NO:21, SEQ ID NO:24, SEQ ID NO:27, SEQ ID NO:30, SEQ ID NO:33, SEQ ID NO:36, SEQ ID NO:39, SEQ ID NO:42, SEQ ID NO:45, SEQ ID NO:48, SEQ ID NO:155, SEQ ID NO:158, SEQ ID NO:161, SEQ ID NO:164, SEQ ID NO:167, SEQ ID NO:170, SEQ ID NO:1860, SEQ ID NO:1863, SEQ ID NO:1866, SEQ ID NO:1869, SEQ ID NO:1871, SEQ ID NO:1874, SEQ ID NO:1876, SEQ ID NO:1907, SEQ ID NO:1909, SEQ ID NO:1911, SEQ ID NO:1913, SEQ ID NO:1916, SEQ ID NO:1918, SEQ ID NO:1921, SEQ ID NO:1923, SEQ ID NO:1926, SEQ ID NO:1928, and SEQ ID NO:1931, under conditions comprising (1) hybridizing in a solution comprising 1X SSC in the absence of helix destabilizing compounds, at a temperature of about 37°C and (2) washing in a solution comprising 1X SSC

and in the absence of helix destabilizing compounds, at a temperature of about 47.5°C, wherein said isolated protein has chloride channel activity.

40. The protein of Claim 39, wherein said protein comprises an amino acid sequence selected from the group consisting of SEQ ID NO:14, SEQ ID NO:20, SEQ ID NO:26, SEQ ID NO:32, SEQ ID NO:38, SEQ ID NO:44, SEQ ID NO:154, SEQ ID NO:160, SEQ ID NO:163, SEQ ID NO:169, SEQ ID NO:1862, SEQ ID NO:1868, SEQ ID NO:1915, SEQ ID NO:1920, SEQ ID NO:1925, and SEQ ID NO:1930.

41. A composition comprising an excipient and an isolated protein of Claim 39.

42. An isolated antibody that selectively binds to a protein as set forth in Claim 39.

43. A composition comprising an excipient and an isolated antibody of Claim 42.

44. A method to identify a compound capable of inhibiting activity of an isolated protein of Claim 39, said method comprising contacting an isolated protein of Claim 39 with a putative inhibitory compound under conditions in which, in the absence of said compound, said protein has activity; and determining if said putative inhibitory compound inhibits said activity.

45. A kit to identify a compound capable of inhibiting activity of an isolated protein of Claim 39, said test kit comprising an isolated protein of Claim 39 and a means for determining the extent of inhibition of said activity in the presence of a putative inhibitory compound.

46. An isolated nucleic acid molecule expressed by a tissue selected from the group consisting of a flea HMT tissue and a flea HNC tissue, identified by a method comprising:
(a) constructing a cDNA library enriched for HMT or HNC expressed sequences; and
(b) identifying a nucleic acid molecule in said library.

47. The nucleic acid molecule of Claim 46, wherein said nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of: SEQ ID NO:13, SEQ

ID NO:15, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:48, SEQ ID NO:153, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:158, SEQ ID NO:159, SEQ ID NO:161, SEQ ID NO:162, SEQ ID NO:164, SEQ ID NO:165, SEQ ID NO:167, SEQ ID NO:168, SEQ ID NO:170, SEQ ID NO:1859, SEQ ID NO:1860, SEQ ID NO:1861, SEQ ID NO:1863, SEQ ID NO:1864, SEQ ID NO:1866, SEQ ID NO:1867, SEQ ID NO:1869, SEQ ID NO:1870, SEQ ID NO:1871, SEQ ID NO:1905, SEQ ID NO:1906, SEQ ID NO:1907, SEQ ID NO:1908, SEQ ID NO:1909, SEQ ID NO:1910, SEQ ID NO:1911, SEQ ID NO:1912, SEQ ID NO:1913, SEQ ID NO:1914, SEQ ID NO:1916, SEQ ID NO:1917, SEQ ID NO:1918, SEQ ID NO:1919, SEQ ID NO:1921, SEQ ID NO:1922, SEQ ID NO:1923, SEQ ID NO:1924, SEQ ID NO:1926, SEQ ID NO:1927, SEQ ID NO:1928, SEQ ID NO:1929, SEQ ID NO:1931, and a nucleic acid sequence of Table I, a nucleic acid sequence of Table II, a nucleic acid sequence of Table III, and a nucleic acid sequence of Table IV.